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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER

KIM, DAVID S

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/877,684

Applicant(s)

GE ET AL.

Examiner

David S. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-53 and 55-77 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-25, 27, 28, 30-53, 55-62, 64, 65 and 67-77 is/are allowed.
- 6) ☒ Claim(s) 26, 29, 63 and 66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Applicant's compliance with the objections to the drawings in the previous Office Action (Paper No. 7, mailed 11 March 2004) is noted and appreciated. Replacement drawing sheets were received on 11 June 2004. However, these drawings are disapproved due to the objections listed below.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s):

(**claims 26 and 63**) wherein the number of said BSSs is dependent on a relationship with the maximum number of wavelengths carried by an input fiber wherein said relationship is one to two;

(**claims 29 and 66**) wherein said optical switch is scalable up or down to take advantage of improvements in the wavelength capacity of said FDL buffer banks; and

(**claim 48**) wherein each of said space switch blocks further comprise:

one or more space switch splitters (the labels "SPACE SWITCH BLOCK" and "18" do not seem to include space switch splitters 51; suggested correction: adjust Fig. 1 labels "SPACE SWITCH BLOCK" and "18" to include space switch splitters 51, along with any necessary corresponding adjustments to the specification).

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

3. The drawings are objected to because of the following informalities:

In the replacement drawing sheet for Fig. 1 (Paper No. 8, received 11 June 2004):

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the outputs of splitters 51 are numbered 1 to N where 1 to n may be intended (see Paper No. 8, p. 2, replacement paragraph, l. 4);

the number of BSSs are numbered 1 to N where 1 to n may be intended (see paragraph [0053], p. 20); and

the output wavelength converters 28 convert signals into a set of 1 to N wavelengths where 1 to n wavelengths may be intended.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

In the replacement drawing sheet for Fig. 1 (Paper No. 8, received 11 June 2004): 52 and 64; and

In the replacement drawing sheet for Fig. 2 (Paper No. 8, received 11 June 2004): 64.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application.

5. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted

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by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The abstract of the disclosure is objected to because of its undue length. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

7. The disclosure is objected to because of the following informalities:

In paragraph [0001], "June 8, 2001" is used where – June 8, 2000 – may be intended.

In paragraph [0011], "output of optical switch 10" is used where – output of prior art switches and routers – (or some other similar text) may be intended.

On p. 9, l. 6, "to their respective BSS" is used where – to their respective BSSs – may be intended.

In paragraph [0034], "optical space switch block 18" is used where – optical space switch 19 – may be intended.

On p. 12, last line, "operation of space switches 18" is used where – operation of space switches 19 – may be intended.

In Paper No. 8, p. 2, replacement paragraph, l. 3, "from 1 to N space switches 19" is used where – from 1 to n space switches 19 – may be intended.

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In paragraph [0064], l. 5, "prior art such systems" is used where – such prior art systems – may be intended.

In paragraph [0068], "However, although...86, each" is used where – However, although...86 are – may be intended.

Appropriate correction is required.

Claim Objections

8. **Claim 18** is objected to because of the following informalities:

In claim 18, l. 3, "demultiplexers" is used where – multiplexers – may be intended.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. **Claims 26, 29, 63, and 66** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 26, 29, 63, and 66 disclose claim limitations, which appear to correspond to paragraphs [0064-0065] for support. In particular, these limitations claim features of an invention that did not exist at the time the application was filed, as declared in paragraphs [0064-0065]. The drawings do not show these limitations. The specification projects possible adjustments to Applicant's invention in the case that certain technologies develop to enable these limitations. However, in view of the lack of such developments (paragraphs [0064-0065]) at the time the application was filed, these limitations were not described in the specification in

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such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention of claims 26, 29, 63, and 66.

Allowable Subject Matter

11. **Claims 2-25, 27-28, 30-53, 55-62, 64-65, and 67-77** are allowed.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rotolo et al. is cited to show a related WDM optical switching system comprising some general components in common with Applicant's invention: one or more input splitters, one or more space switch blocks, one or more fixed wavelength filters, one or more broadcast and select switches (BSSs), and one or more output multiplexers. In particular, the front portion of the system of Rotolo et al. before its BSSs performs a similar function to the function performed by the front portion of Applicant's invention before Applicant's BSSs. Gambini et al. and Renaud et al. are cited to show related optical packet switching systems with input wavelength converters and output wavelength converters. Gambini et al. and Renaud et al. also show a broadcast and select switch that matches Applicant's broadcast and select switch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 571-272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

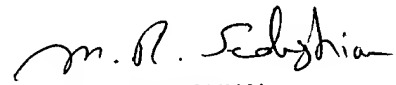
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DSK


M. R. SEDIGHIAN
PRIMARY EXAMINER